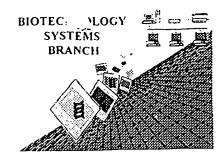
RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:	09/759,/30	
Source:	OIPE	
Date Processed by STIC:	1-29-01	

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216. PATENTIN 2.1 c-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax) PATENTIN 3.0 c-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST 25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address: http://www.uspto.gov/web/offices/pac/checker

ERROR DETECTED SUGGESTED CORRECTION SERIAL NUMBER: 09/759, /3

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE		
1	_ Wrapped Nucleics	The number/text at the end of each line "wrapped" down to the next line.
		This may occur if your file was retrieved in a word processor after creating it.
		Please adjust your right margin to .3, as this will prevent "wrapping".
2	_ Wrapped Aminos	The amino acid number/text at the end of each line "wrapped " down to the next line.
		This may occur if your file was retrieved in a word processor after creating it.
		Please adjust your right margin to .3, as this will prevent "wrapping".
3	_ Incorrect Line Length	The rules require that a line not exceed 72 characters in length. This includes spaces.
4	_ Misaligned Amino Acid	The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs
	Numbering	between the numbering. It is recommended to delete any tabs and use spacing between the numbers.
5	_ Non-ASCII	This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.
,		Please ensure your subsequent submission is saved in ASCII text so that it can be processed.
6	Variable Length	Sequence(s) contain n's or Xaa's which represented more than one residue.
·	_ valiable congin	As per the rules, each n or Xaa can only represent a single residue.
		Please present the maximum number of each residue having variable length and
		indicate in the (ix) feature section that some may be missing.
		, and the same same same same same same same sam
7	Patentin ver. 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid
	•	sequence(s) Normally, PatentIn would automatically generate this section from the
		previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section
		to the subsequent amino acid sequence. This applies primarily to the mandatory <220>-<223>
		sections for Artificial or Unknown sequences.
8	Skipped Sequences	Sequence(s) missing. If intentional, please use the following format for each skipped sequence:
	(OLD RULES)	(2) INFORMATION FOR SEQ ID NO:X:
		(i) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")
		(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:
		This sequence is intentionally skipped
•		Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).
9	Skipped Sequences	Sequence(s) missing. If intentional, please use the following format for each skipped sequence.
	(NEW RULES)	<210> sequence id number
		<400> sequence id number
,	/	000
10 🗸	Use of n's or Xaa's	Use of n's and/or Xaa's have been detected in the Sequence Listing.
	(NEW RULES)	Use of <220> to <223> is MANDATORY if n's or Xaa's are present.
	()	In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
		The state of the s
11	Use of <213>Organism	Sequence(s) are missing this mandatory field or its response.
	(NEW RULES)	, , , , , , , , , , , , , , , , , , , ,
12	Use of <220>Feature	Sequence(s) are missing the <220>Feature and associated headings.
	(NEW RULES)	Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"
		Please explain source of genetic material in <220> to <223> section.
٠		(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of new Rules)
13	Patentin ver. 2.0 "bug"	Please do not use "Copy to Disk" function of Patentln version 2.0. This causes a corrupted
—		file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing).
		Instead, please use "File Manager" or any other means to copy file to floppy disk.

OIPE

```
Does Not Comply
                                                                               Corrected Diskette Needed
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                    Output Set: N:\CRF3\01292001\I759130.raw
      3 <110> APPLICANT: MCCARTHY, Sean A
             FRASER, Christopher C
             SHARP, John D
             BARNES, Thomas S
      6
             KIRST, Susan J
      8
             MACKAY, Charles R
             MYERS, Paul S
     10
             LEIBY, Kevin R
             WRIGHTON, Nicholas
     11
     12
             GOODEARL, Andrew
             HOLTZMAN, Douglas A
     15 <120> TITLE OF INVENTION: NOVEL GENES ENCODING PROTEINS HAVING PROGNOSTIC,
             DIAGNOSTIC, PREVENTIVE, THERAPEUTIC, AND OTHER USES
     18 <130> FILE REFERENCE: 210147.0066/66US
C--> 20 <140> CURRENT APPLICATION NUMBER: US/09/759,130
     21 <141> CURRENT FILING DATE: 2001-01-12
     23 <150> PRIOR APPLICATION NUMBER: US 09/479,249
     24 <151> PRIOR FILING DATE: 2000-01-07
     26 <150> PRIOR APPLICATION NUMBER: US 09/559,497
     27 <151> PRIOR FILING DATE: 2000-04-27
     29 <150> PRIOR APPLICATION NUMBER: US 09/578,063
     30 <151> PRIOR FILING DATE: 2000-05-24
     32 <150> PRIOR APPLICATION NUMBER: US 09/333,159
     33 <151> PRIOR FILING DATE: 1999-06-14
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     36 <151> PRIOR FILING DATE: 2000-07-14
     38 <150> PRIOR APPLICATION NUMBER: US 09/342,364
     39 <151> PRIOR FILING DATE: 1999-06-29
     41 <150> PRIOR APPLICATION NUMBER: US 09/608,452
     42 <151> PRIOR FILING DATE: 2000-06-30
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     45 <151> PRIOR FILING DATE: 1999-09-10
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     51 <151> PRIOR FILING DATE: 1999-10-19
     53 <160> NUMBER OF SEQ ID NOS: 460
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ERRORED SEQUENCES
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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/759,130

DATE: 01/29/2001

TIME: 13:45:10

Input Set : A:\10147-61.txt
Output Set: N:\CRF3\01292001\1759130.raw

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RAW SEQUENCE LISTING

DATE: 01/29/2001

PATENT APPLICATION: US/09/759,130

Input Set : A:\10147-61.txt
Output Set: N:\CRF3\01292001\1759130.raw

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316 500 505 510 318 The Thr Ile Pro Lys Gly Ala Glu Ser Gly Phe His Val Thr Arg Ile 319 515 520 525 321 Ala Ile Val Ala Gly Asn Glu Glu Asn Ile Phe Ile Ile Asp Pro Arg 322 530 540 324 Ser Cys Asp Ile His Thr Asn Val Ser Met Asp Ser Val Pro Tyr Thr 325 545 550 550 555 560 327 Glu Trp Glu Leu Ser Val Ile 11e Gln Asp Lys Gly Asu Pro Gln Leu 328 565 570 575 330 His Thr Lys Val Leu Leu Lys Cys Met Ile Phe Glu Tyr Ala Glu Ser 331 580 585 333 Val Thr Ser Thr Ala Met Thr Ser Val Ser Gln Ala Ser Leu Asp Val 334 595 600 336 Leu Val Ile Met Val Leu Phe Ala Thr Arg Cys Asn Arg Glu Lys Lys 337 610 615 620 339 Asp Thr Arg Ser Tyr Asn Cys Arg Val Ala Glu Ser Thr Tyr Gln His 340 625 630 635 640 342 His Pro Lys Arg Pro Ser Arg Gln Ile His Lys Gly Asp Ile Thr Leu 343 645 650 345 Val Pro Thr Ile Asn Gly Thr Leu Pro 1le Arg Ser His His Arg Ser 346 660 665 670 348 Ser Pro Ser Ser Ser Pro Thr Leu Glu Arg Gly Gln Met Gly Ser Arg 349 675 680 685 351 Ser Ser Asn His Val Pro Glu Asn Phe Ser Leu Glu Leu Thr His Ala 352 690 695 700 354 Thr Pro Ala Val Glu Gln Val Ser Gln Leu Leu Ser Met Leu His Gln 355 705 710 715 720° 357 Gly Gln Tyr Gln Pro Arg Pro Ser Phe Arg Gly Asn Lys Tyr Ser Arg 358 725 730 730 360 Ser Tyr Arg Tyr Ala Leu Gln Asp Met Asp Lys Phe Ser Leu Lys Asp 361. $740 \hspace{1.5cm} 745 \hspace{1.5cm} 750$ 363 Ser Gly Arq Gly Asp Ser Glu Ala Gly Asp Ser Asp Tyr Asp Leu Gly 364 755765765 366 Arg Asp Ser Pro Ile Asp Arg Leu Gly Gly Gly Phe Ser Asp Leu 367 770 785

Input Set : A:\10147-61.txt
Output Set: N:\CRF3\01292001\1759130.raw

369 Glu Glu Cys Arg Val Leu Gly His Ser Asp Gln Cys Trp Met Pro Pro 370 785 790 795 372 Leu Pro Ser Pro Ser Ser Asp Tyr Arg Ser Asn Met Phe Ile Pro Gly 805 810 375 Glu Clu Phe Pro Thr Gln Pro Gln Gln Gln His Pro His Gln Ser Leu 376 820 825 830 378 Glu Asp Asp Ala Gln Pro Ala Asp Ser Gly Glu Lys Lys Lys Ser Phe 379 835 840 845 30 508 # 5 30 508 # 5 30 5hown

1151 listed 381 Ser Thr Phe Gly Lys Asp Ser Pro Asn Asp Glu Asp Thr Gly Asp Thr 382 850 855 860 384 Val Asp Arg Ser Asn Ser Leu Glu Arg Arg Lys Gly Pro Leu Pro Ala 385 865 870 870 880 387 Glu Glu Ile Pro Glu Asn Tyr Glu Glu Asp Asp Phe Asp Asn Val Leu 388 885 890 390 Leu Val Ala Glu Ile Asn Lys Leu Leu Gln Asp Val Arg Gln Ser E--> 391 900 905 10 407 <210> SEQ ID NO 5 408 <211> LENGTH 1124 //s red 409 <212> TYPE: PRT - 884 - 1 409 <212> TYPE: PRI - 884 <hown 412 <400> SEQUENCE: 5 413 Lys Asn Leu Lys Tyr Arg Iie Tyr Glu Glu Glu Arg Val Gly Ser Val 414 1 5 5 10 10 15 416 Ile Ala Arg Leu Ser Glu Asp Val Ala Asp Val Leu Leu Lys Leu Pro 417 202530 419 Asn Pro Ser Thr Val Arg Phe Arg Ala Met Gln Arg Gly Asn Ser Pro 420 354045 422 Leu Leu Val Val Asn Glu Asp Asn Gly Glu Ile Ser Ile Gly Ala Thr 423 55 60 425 Glu Phe Asp Val Ile Thr Leu Pro Thr Glu His Leu Gln Leu Phe His 426 65428 Ile Glu Val Glu Val Leu Asp Ile Asn Asp Asn Ser Pro Gln Phe Ser 429 859095 431 Arg Ser Leu Ile Pro Ile Glu Ile Ser Glu Ser Ala Ala Val Gly Thr 432 100 1.05 110 434 Arg Tle Pro Leu Asp Ser Ala Phe Asp Pro Asp Val Gly Glu Asn Ser 435 115 120 125 435 115 120 125 437 Leu His Thr Tyr Ser Leu Ser Ala Asn Asp Phe Phe Asn Ile Glu Val 438 130 135 140 440 Arg Thr Arg Thr Asp Gly Ala Lys Tyr Ala Glu Leu Ile Val Val Arg 441 145 $1.501.501.551.55$ 443 Ala Ser Asp Met Gly Val Pro Gln Arg Ser Gly Ser Ser Ile Leu Lys 444 165 170 175446 Ile Ser Ile Ser Asp Ser Asn Asp Asn Ser Pro Ala Phe Glu Gln Gln 447 $$ 180 $$ 185 $$ 190 $$ 449 Ser Tyr Ile Ile Gln Leu Leu Glu Asn Ser Pro Val Gly Thr Leu Leu 450 $$ 195 $$ 200 $$ 205 452 Leu Asp Leu Asn Ala Thr Asp Pro Asp Glu Gly Ala Asn Gly Lys Ile 215

Input Set : A:\10147-61.txt
Output Set: N:\CRF3\01292001\1759130.raw

455 Val Tyr Ser Phe Ser Ser His Val Ser Pro Lys Ile Met Glu Thr Phe 230 456 225 235 458 Asp Tyr Glu Ile Thr Lys Ser Tyr Glu Ile Asp Val Gln Ala Gln Asp 245 250 255 461 Leu Gly Pro Asn Ser Ile Pro Ala His Cys Lys Ile Ile Ile Lys Val 462 260265270 464 Val Asp, Val Asn Asp Asn Lys Pro Glu Tle Asn Ile Asn Leu Met Ser 465 275 280 285 467 Pro Gly Lys Glu Glu Ile Ser Tyr Ile Phe Glu Gly Asp Pro Ile Asp 468 290 295 300 470 Thr Phe Val Ala Leu Val Arg Val Gln Asp Lys Asp Ser Gly Leu Asn 471 305 310315315 473 Gln Lys Thr Tyr Glu Asn Asn Tyr Leu Tle Leu Thr Asn Ala Thr Leu 474 325 330 335 476 Asp Arg Glu Lys Arg Ser Glu Tyr Ser Leu Thr Val Ile Ala Glu Asp 477 $340 \hspace{1.5cm} 345 \hspace{1.5cm} 345$ 479 Arg Gly Thr Pro Ser Leu Ser Thr Val Lys His Phe Thr Val Gln Ile 480 355 360 365 482 Asn Asp Ile Asn Asp Asn Pro Pro His Phe Gln Arg Ser Arg Tyr Glu 483 370 375 485 Phe Val Ile Ser Glu Asn Asn Ser Pro Gly Ala Tyr Ile Thr Thr Val 486 385 390 395 488 Thr Ala Thr Asp Pro Asp Leu Gly Glu Asn Gly Gln Val Thr Tyr Thr 405 489 410 491 Thr Ile Asp Pro Ser Asn Gly Ala Ile Tyr Ala Leu Arg Ile Phe Asp 492 420 425 430 494 His Glu Glu Val Ser Gln Tle Thr Phe Val Val Glu Ala Arg Asp Gly 495 435 440 445 497 Gly Ser Pro Lys Gln Leu Val Ser Asn Thr Thr Val Val Leu Thr Ile 498 450 455 500 Ile Asp Giu Asn Asp Asn Val Pro Val Val Ile Gly Pro Ala Leu Arg 501 465 470 475 485 503 Asn Asn Thr Ala Glu Ile Thr Ile Pro Lys Gly Ala Glu Ser Gly Phe 504 485490490485 506 Ala Glu Leu Ser Cys Ala Ile Val. Ala Gly Asn Glu Glu Asn Ile Phe 507 500505505510 509 Ile Ile Asp Pro Arg Ser Cys Asp Ile His Thr Asn Val Ser Met Asp 510 525 525 512 Ser Val Pro Tyr Thr Glu Trp Glu Leu Ser Val Ile Ile Gln Asp Lys 513 530 535 540 515 Gly Asn Pro Gln Leu Ris Thr Lys Val Leu Leu Lys Cys Met Tle Phe 516 545 550 550 555 518 Glu Tyr Ala Glu Ser Val Thr Ser Thr Ala Met Thr Ser Val Ser Gln 519 565 570 575 521 Ile Cys Ala Val Leu Leu Val Ile Met Val Leu Phe Ala Thr Arg Cys 522 580585585 524 Asn Arg Glu Lys Lys Asp Thr Arg Ser Tyr Asn Cys Arg Val Ala Glu 525 595 600 605 605 527 Ser Thr Tyr Gln His His Pro Lys Arg Pro Ser Arg Gln Ile His Lys

Input Set : A:\10147-61.txt

Output Set: N:\CRF3\01292001\I759130.raw

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610
      530 Gly Asp Tle Thr Leu Val Pro Thr Ile Asn Gly Thr Leu Pro Ile Arg 531 625 630 635 640
      533 Ser His His Arg Ser Ser Pro Ser Ser Ser Pro Thr Leu Glu Arg Gly 534 645 650 655
      536 Gln Met Gly Ser Arg Gln Ser His Asn Ser His Gln Ser Leu Asn Ser
      537 660 665
      539 Glu Leu Thr His Ala Thr Pro Ala Val Glu Gln Val Ser Gln Leu Leu 540 685
      542 Ser Met Leu His Gln Gly Gln Tyr Gln Pro Arg Pro Ser Phe Arg Gly 543 690 695 700
      545 Asn Lys Tyr Ser Arg Ser Tyr Arg Tyr Ala Leu Gln Asp Met Asp Lys 546 705 710 715 720
      548 Phe Ser Leu Lys Asp Ser Gly Arg Gly Asp Ser Glu Ala Gly Asp Ser
549 725 730 735
      551 Asp Tyr Asp Leu Gly Arg Asp Ser Pro Tle Asp Arg Leu Leu Gly Glu
552 740 745 750
      554 Met Arg Leu Cys Thr Glu Glu Cys Arg Val Leu Gly His Ser Asp Gln
555 755 760 765
      557 Cys Trp Met Pro Pro Leu Pro Ser Pro Ser Ser Asp Tyr Arg Ser Asn 558 \phantom{\bigg|}770\phantom{\bigg|}775\phantom{\bigg|}775\phantom{\bigg|}780\phantom{\bigg|}780\phantom{\bigg|}
      560 Met Phe Ile Pro Gly Glu Glu Phe Pro Thr Gln Pro Gln Gln Gln His
561 785 790 795 800
      563 Pro His Gln Ser Leu Glu Asp Asp Ala Gln Pro Ala Asp Ser Gly Glu 564 805 815
      566 Lys Lys Lys Ser Phe Ser Thr Phe Gly Lys Asp Ser Pro Asn Asp Glu 567 \phantom{\bigg|} 820 \phantom{\bigg|} 825 \phantom{\bigg|} 830
      569 Ser Ser Val Phe Gln Arg Leu Leu Pro Pro Ser Leu Asp Thr Tyr Ser
      570 835
                                          840
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583 found
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      594~\mathrm{Asn} Pro Ser Thr Val Arg Phe Arg Ala Met Gln Arg Gly Asn Ser Pro 595~35~40~45
      597 Leu Leu Val Val Asn Glu Asp Asn Gly Glu Ile Ser Ile Gly Ala Thr 598 \phantom{1}50\phantom{0} 55 \phantom{1}60\phantom{0}
      600 Glu Phe Asp Val Ile Thr Leu Pro Thr Glu His Leu Gln Leu Phe His
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Input Set : A:\10147-61.txt
Output Set: N:\CRF3\01292001\1759130.raw

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 658
 370
 375
 380
 660 Phe Val Ile Ser Glu Asn Asn Ser Pro Gly Ala Tyr Ile Thr Thr Val 661 385 390 395 400666 Thr Ile Asp Pro Ser Asn Gly Ala Ile Tyr Ala Leu Arg Ile Phe Asp 667 420 425 430 $669\ \mathrm{His}\ \mathrm{Glu}\ \mathrm{Glu}\ \mathrm{Val}\ \mathrm{Ser}\ \mathrm{Gln}\ \mathrm{Hie}\ \mathrm{Thr}\ \mathrm{Phe}\ \mathrm{Val}\ \mathrm{Val}\ \mathrm{Glu}\ \mathrm{Ala}\ \mathrm{Arg}\ \mathrm{Asp}\ \mathrm{Gly}$ 670 435 440 672 Gly Ser Pro Lys Gln Leu Val Ser Asn Thr Thr Val Val Leu Thr Ile 673 450 455 460 675 Ile Asp Glu Asn Asp Asn Val Pro Val Val Ile Gly Pro Ala Leu Arg

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PATENT APPLICATION: US/09/759,130
                                                                 TIME: 13:45:10
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                      Output Set: N:\CRF3\01292001\1759130.raw
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679 485 490 495
     681 Ala Glu Leu Ser Cys Ala 11e Val Ala Gly Asn Glu Glu Asn 11e Phe
                   500
                                           505
     684 lle lle Asp Pro Arg Ser Cys Asp Ile His Thr Asn Val Ser Met Asp
     685 5:15
                                     520
                                                            525
     687 Ser Val Pro Tyr Thr Glu Trp Glu Leu Ser Val Ile Ile Gln Asp Lys
     688 530
                                535
                                                      540
     690 Gly Asn Pro Glu Leu His Thr Lys Val Leu Leu Lys Cys Met 11e Phe 691 545 550 555 560
     693 Glu Tyr Ala Glu Ser Val Thr Ser Thr Ala Met Thr Ser Val Ser Gln
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                                            570
                                                                        seg. #6
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     715 <400> SEQUENCE: 8
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     717 1
    719 Val Ala Glu Ser Thr Tyr Gln His His Pro Lys Arg Pro Ser Arg Gln 720 \phantom{\bigg|}20\phantom{\bigg|}25\phantom{\bigg|}30\phantom{\bigg|}
     722 Ile His Lys Gly Asp Ile Thr Leu Val Pro Thr Ile Asn Gly Thr Leu
                                                                                          - 295 shown
     723 35
                                       40
    725 Pro Ile Arg Ser His His Arg Ser Ser Pro Ser Ser Pro Thr Leu
                                55
                                                        60
    728 Glu Arg Gly Gln Met Gly Ser Arg Gln Ser His Asn Ser His Gln Ser 729 65 70 75 80
     731 Phe Ser Leu Glu Leu Thr His Ala Thr Pro Ala Val Glu Gln Val Ser
                          8.5
                                                90
    734 Gln Leu Leu Ser Met Leu His Gln Gly Gln Tyr Gln Pro Arg Pro Ser 735 . 100 . 105 . 110
    737 Phe Arg Gly Asn Lys Tyr Ser Arg Ser Tyr Arg Tyr Ala Leu Gln Asp 738 115 120 125
    740 Met Asp Lys Phe Ser Leu Lys Asp Ser Gly Arg Gly Asp Ser Glu Ala 741 \phantom{-}130\phantom{0} 135 \phantom{-}140\phantom{0}
    743 Gly Asp Ser Asp Tyr Asp Leu Gly Arg Asp Ser Pro Ile Asp Arg Leu 744 145 150 150 155 160
    746 Pro Ala Ala Met Arg Leu Cys Thr Glu Glu Cys Arg Val Leu Gly His
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DATE: 01/29/2001

RAW SEQUENCE LISTING

TIME: 13:45:10 PATENT APPLICATION: US/09/759,130 Input Set : A:\10147-61.txt Output Set: N:\CRF3\01292001\1759130.raw 749 Ser Asp Gln Cys Trp Met Pro Pro Leu Pro Ser Pro Ser Ser Asp Tyr 750 185 180 752 Arg Ser Asn Met Phe Ile Pro Gly Glu Glu Phe Pro Thr Gln Pro Gln 753 195 200 205 755 Gln Gln His Pro His Gln Ser Leu Glu Asp Asp Ala Gln Pro Ala Asp 756 210 215 220 758 Ser Gly Glu Lys Lys Lys Ser Phe Ser Thr Phe Gly Lys Asp Ser Pro 759 225 230 230 235 240 761 Ser Glu Met Ser Ser Val Phe Gln Arg Leu Leu Pro Pro Ser Leu Asp 762 245 250 255 764 Thr Asn Cys Gly Pro Pro Leu Gly Thr His Ser Ser Val Gln Pro Ser 765 260 265 767 His Glu Leu Met Asp Ala Ser Glu Leu Val Ala Glu Ile Asn Lys Leu 768 275 295 shown, 423 listed 770 Leu Gln Asp Val Arg Gln Ser E--> 771 290 295 1043 <210> SEQ ID NO: 33 1044 <211> LENGTH 1150 1045 <212> TYPE: PRT 1150 listed 910 shown 1046 <213> ORGANISM: Homo sapiens 1048 <400> SEQUENCE: 33 1049 Met His Gln Met Asn Ala Lys Met His Phe Arg Phe Val Phe Ala Leu 1050 1 10 1052 Leu Ile Val Ser Phe Asn His Asp Val Leu Gly Lys Asn Leu Lys Tyr 1053 20 25 . 301055 Arg Ile Tyr Glu Glu Gln Arg Val Gly Ser Val Ile Ala Arg Leu Ser 1056 $$ 35 $$ 40 $$ 45 1058 Glu Asp Val Ala Asp Val Leu Leu Lys Leu Pro Asn Pro Ser Thr Val 1059 505055 75 1064 Glu Asp Asn Gly Glu Tle Ser Ile Gly Ala Thr Ile Asp Arg Glu Gln
1065 85 00 00 1067 Thr Leu Pro Thr Glu His Leu Gln Leu Phe His Ile Glu Val Glu Val 1068 1.00 105 110 1070 Leu Asp Ile Ash Asp Ash Ser Pro Gin Phe Ser Arg Ser Leu Ile Pro 1071 $$ 115 $$ 120 $$ 125 1073 Ile Glu Ile Ser Glu Ser Ala Ala Val Gly Thr Arg Ile Pro Leu Asp 1074 130 135 140 1076 Ser Ala Phe Asp Pro Asp Val Gly Glu Asn Ser Leu His Thr Tyr Ser 1077 145 150150155155 1079 Leu Ser Ala Asn Asp Phe Phe Asn Ile Glu Val Arg Thr Arg Thr Asp 1080 $$ 165 $$ 170 $$ 170 $$ 175 1082 Glu Leu Lys Ser Ser Tyr Glu Leu Gln Leu Thr Ala Ser Asp Met Gly 1083 180 185 190 1085 Val Pro Gln Arg Ser Gly Ser Ser Ile Leu Lys Ile Ser Ile Ser Asp 1086 200200 200 1088 Ser Asn Asp Asn Ser Pro Ala Phe Glu Gln Gln Ser Tyr Ile Ile Gln 1089 210 215

RAW SEQUENCE LISTING

DATE: 01/29/2001

Input Set : A:\10147-61.txt
Output Set: N:\CRF3\01292001\1759130.raw

1091 Leu Leu Glu Asn Ser Pro Val Gly Thr Leu Leu Leu Asp Leu Asn Ala 1092 225 235 230 1094 Thr Asp Pro Asp Glu Gly Ala Asn Gly Lys Ile Val Tyr Ser Phe Ser 245 250 1097 Ser His Val Ser Pro Lys Ile Met Glu Thr Phe Lys Ile Asp Ser Glu 1098 260 265 270 1100 Lys Ser Tyr Glu 11e Asp Val Gln Ala Gln Asp Leu Gly Pro Asn Ser 1101 275 280 285 1103 11e Pro Ala His Cys Lys Tle Ile Ile Lys Val Val Asp Val Asn Asp 1104 290 295 300 1106 Asn Lys Pro Glu Ile Asn Ile Asn Leu Met Ser Pro Gly Lys Glu Glu 1107 305 310 315 1109 Ile Ser Tyr Ile Phe Glu Gly Asp Pro Ile Asp Thr Phe Val Ala Leu 1110 325 330 1112 Val Arg Val Gln Asp Lys Asp Ser Gly Leu Asn Gly Glu Ile Val Cys 1113 34034550 1115 Asn Asn Tyr Leu 11e Leu Thr Asn Ala Thr Leu Asp Arg Glu Lys Arg 1116 355 360 3651118 Ser Glu Tyr Ser Leu Thr Val Ile Ala Glu Asp Arg Gly Thr Pro Ser 1119 370 375 380 1121 Leu Ser Thr Val Lys His Phe Thr Val Gln Ile Asn Asp Tle Asn Asp 1122 385 390 400 1124 Asn Pro Pro His Phe Gln Arg Ser Arg Tyr Glu Phe Val Ile Ser Glu 1125 405 410 415 1127 Asn Asn Ser Pro Gly Ala Tyr 1le Thr Thr Val Thr Ala Thr Asp Pro 1128 420 425 430 1130 Phe Ile Leu Gly Ser Ser Ile Thr Thr Tyr Val Thr Ile Asp Pro Ser 1131 445 1133 Asn Gly Ala Ile Tyr Ala Leu Arg Ile Phe Asp His Glu Glu Val Ser 1134 450450455 1136 Gln Ile Thr Phe Val Val Glu Ala Arg Asp Gly Gly Ser Pro Lys Gln 1137 465 470 475 480 1139 Leu Val Ser Asn Thr Thr Val Val Leu Thr Ile Ile Asp Glu Asn Asp 1140 485 490 1142 Asn Val Pro Val Val Tle Gly Pro Ala Leu Arg Asn Asn Thr Ala Glu 1143 500 505 510 1145 Ile Thr Ile Pro Lys Gly Ala Glu Ser Gly Phe His Val Thr Arg Ile 1146 515 520 525 1148 Ala Ile Val Ala Gly Asn Glu Glu Asn Ile Phe Ile Ile Asp Pro Arg 1149 530535535540 1151 Ser Cys Asp 11e His Thr Asn Val. Ser Met Asp Ser Val Pro Tyr Thr 1152 545 550 555 560 1154 Glu Trp Glu Leu Ser Val Ile Ile Gln Asp Lys Gly Asn Pro Gln Leu 1155 565 570 575 1157 Ris Thr Lys Val. Leu Leu Lys Cys Met Ile Phe Glu Tyr Ala Glu Ser 1158 580580585585 1160 Val Thr Ser Thr Ala Met Thr Ser Val Ser Gln Ala Ser Leu Asp Val 1.161 595 600 6051163 Leu Val Ile Met Val Leu Phe Ala Thr Arg Cys Asn Arg Glu Lys Lys

RAW SEQUENCE LISTING

.

DATE: 01/29/2001 TIME: 13:45:10

PATENT APPLICATION: US/09/759,130

Input Set : A:\10147-61.txt

Output Set: N:\CRF3\01292001\1759130.raw

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610
       1166 Asp Thr Arg Ser Tyr Asn Cys Arg Val Ala Glu Ser Thr Tyr Gln His
1167 625 630 635 640
       1169 His Pro Lys Arg Pro Ser Arg Gln Ile His Lys Gly Asp Ile Thr Leu
1170 645 650 655
       1172 Val Pro Thr Ile Asn Gly Thr Leu Pro Ile Arg Ser His His Arg Ser 1173 \phantom{\bigg|} 660 \phantom{\bigg|} 665 \phantom{\bigg|} 670 \phantom{\bigg|}
       1175 Ser Pro Ser Ser Ser Pro Thr Leu Glu Arg Gly Gln Met Gly Ser Arg
       1176 675
                                     680
                                                                             685
      1178 Ser Ser Asn His Val Pro Glu Asn Phe Ser Leu Glu Leu Thr His Ala
1179 690 695 700
      1181 Thr Pro Ala Val Glu Val Ser Gln Leu Leu Ser Met Leu His Gln Gly 1182 705 710 715 720
      1184 Gln Tyr Gln Pro Arg Pro Ser Phe Arg Gly Asn Lys Tyr Ser Arg Ser
1185 725 730 735
      1187 Tyr Arg Tyr Ala Leu Gln Asp Met Asp Lys Phe Ser Leu Lys Asp Ser
1188 740 745 750
      1190 Gly Arg Gly Asp Ser Glu Ala Gly Asp Ser Asp Tyr Asp Leu Gly Arg 1191 755 760 765
      1193 Asp Ser Pro Ile Asp Arg Leu Leu Gly Glu Gly Phe Ser Asp Leu Phe 1194 \phantom{\bigg|} 770 \phantom{\bigg|} 775 \phantom{\bigg|} 780
      1196 Glu Cys Arg Val Leu Gly His Ser Asp Gln Cys Trp Met Pro Pro Leu 1197 785 790 790 800
      1199 Pro Ser Pro Ser Ser Asp Tyr Arg Ser Asn Met Phe Ile Pro Gly Glu
      1200 805
                                                 810
      1202 Glu Phe Pro Thr Gln Pro Gln Gln Gln His Pro His Gln Ser Leu Glu 1203 \phantom{\bigg|}820\phantom{\bigg|}820\phantom{\bigg|}830\phantom{\bigg|}
      1205 Asp Asp Ala Gin Pro Ala Asp Ser Gly Glu Lys Lys Ser Phe Ser 1206 835 840 840 845
      1208 Thr Phe Gly Lys Asp Ser Pro Asn Asp Glu Asp Thr Gly Asp Thr Ser 1209 850 855 860
      1211 Asp Arg Ser Asn Ser Leu Glu Arg Arg Lys Gly Pro Leu Pro Ala Lys 1212 865 \phantom{\bigg|} 870 \phantom{\bigg|} 870 \phantom{\bigg|} 880 880
      1214 Asn His Leu Asn Asp Gly Lys His Glu Leu Met Asp Ala Ser Glu Leu 1215 885 890 895
                                                                                                   1150 listed seg # 33
12.17 Val Ala Glu Ile Asn Lys Leu Leu Gln Asp Val Arg (in Ser E--> 12.18 900 905 910
                                            905
      1226 <210> SEQ ID NO: 35
1227 <211> LENGTH (1123)
1228 <212> TYPE: PRT //23 /isted, 883 shown
      1229 <213> ORGANISM: Homo sapiens
      1231 <400> SEQUENCE: 35
      1232 Lys Asn Leu Lys Tyr Arg Ile Tyr Glu Glu Gln Arg Val Gly Ser Val 1233 \phantom{-}1\phantom{+} 5 \phantom{-}1.0\phantom{+} . 15
      1235 Ile Ala Arg Leu Ser Glu Asp Val Ala Asp Val Leu Leu Lys Leu Pro 1236 \phantom{\bigg|}20\phantom{\bigg|}20\phantom{\bigg|}25\phantom{\bigg|}30\phantom{\bigg|}
      1238 Asn Pro Ser Thr Val Arg Phe Arg Ala Met Gln Arg Gly Asn Ser Pro 1239 \phantom{\bigg|}35\phantom{\bigg|}40\phantom{\bigg|}45\phantom{\bigg|}
      1241 Leu Leu Val Val Asn Glu Asp Asn Gly Glu Ile Ser Ile Gly Ala Thr
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Input Set : A:\10147-61.txt
Output Set: N:\CRF3\01292001\1759130.raw

1244 Glu Phe Asp Val Ile Thr Leu Pro Thr Glu His Leu Gln Leu Phe His 1245 65 70 75 80 1247 11e Glu Val Glu Val Leu Asp 11e Asn Asp Asn Ser Pro Gln Phe Ser 1248 90 95 1250 Arg Ser Leu Ile Pro Ile Glu 1le Ser Glu Ser Ala Ala Val Gly Thr 1251 100 105 110 1253 Arg Ile Pro Leu Asp Ser Ala Phe Asp Pro Asp Val Gly Glu Asn Ser 1254 1.15 120 1256 Leu His Thr Tyr Ser Leu Ser Ala Asn Asp Phe Phe Asn Ile Glu Val 1257 130 135 140 1259 Arg Thr Arg Thr Asp Gly Ala Lys Tyr Ala Glu Leu Ile Val Val Arg 1260 145 $$ 150 $$ 155 $$ 160 1262 Ala Ser Asp Met Gly Val Pro Gln Arg Ser Gly Ser Ser Ile Leu Lys 1263 165 170 175 1265 Ile Ser Ile Ser Asp Ser Asp Asp Asp Ser Pro Ala Phe Glu Gln Gln 1266 $$ 180 $$ 185 $$ 190 $$ 1268 Ser Tyr Ile Ile Gin Leu Leu Glu Asn Ser Pro Val Gly Thr Leu Leu 1269 195 200 205 1271 Leu Asp Leu Asn Ala Thr Asp Pro Asp Glu Gly Ala Asn Gly Lys Ile 1272 210 215 220 1274 Val Tyr Ser Phe Ser Ser His Val Ser Pro Lys Ile Met Glu Thr Phe 1275 225 230 235 240 1277 Asp Tyr Glu Ile Thr Lys Ser Tyr Glu Ile Asp Val Gln Ala Gln Asp 1278 245 250 1280 Leu Gly Pro Asn Ser Ile Pro Ala His Cys Lys Ile Ile Lys Val 1281 260 265 270 1283 Val Asp Val Asn Asp Asn Lys Pro Glu Ile Asn Ile Asn Leu Met Ser 1284 275 280 280 285 \cdot 1286 Pro Gly Lys Glu Glu Ile Ser Tyr Ile Phe Glu Gly Asp Pro Ile Asp 1287 290 295 300 1289 Thr Phe Val Ala Leu Val Arg Val Gln Asp Lys Asp Ser Gly Leu Asn 1290 305 310310315315 1292 Gln Lys Thr Tyr Glu Asn Asn Tyr Leu Ile Leu Thr Asn Ala Thr Leu 330 1.293 325 1295 Asp Arg Glu Lys Arg Ser Glu Tyr Ser Leu Thr Val Ile Ala Glu Asp 1296 340 340 350 1298 Arg Gly Thr Pro Ser Leu Ser Thr Val Lys His Phe Thr Val Gln 11e 1299 355360360365 1301 Asn Asp The Asn Asp Asn Pro Pro His Phe Gln Arg Ser Arg Tyr Glu 1302 $$ 370 $$ 375 $$ 380 1304 Phe Val Ile Ser Glu Asn Asn Ser Pro Gly Ala Tyr Ile Thr Thr Val 1305 385 390395395 1307 Thr Ala Thr Asp Pro Asp Leu Gly Glu Asn Gly Gln Val Thr Tyr Thr 1308 405405410415 13.10 Thr Ile Asp Pro Ser Asn Gly Ala Ile Tyr Ala Leu Arg Ile Phe Asp 1311 420 425 430 1313 His Glu Glu Val Ser Gln Ile Thr Phe Val Val Glu Ala Arg Asp Gly 131.4 435 440

Tnput Set : A:\10147-61.txt
Output Set: N:\CRF3\01292001\1759130.raw

1316 Gly Ser Pro Lys Gln Leu Val Ser Asn Thr Thr Val Val Leu Thr Ile 1317 450 455 460 1319 Ile Asp Glu Asn Asp Asn Val Pro Val Val Ile Gly Pro Ala Leu Arg 1320 465 470 475 1322 Asn Asn Thr Ala Glu Ile Thr Ile Pro Lys Gly Ala Glu Ser Gly Phe 1323 485495 1325 Ala Glu Leu Ser Cys Ala Tle Val Ala Gly Asn Glu Glu Asn 11c-Phe 1326 500 505 510 1328 Ile Ile Asp Pro Arg Ser Cys Asp Ile His Thr Asn Val Ser Met Asp 1329 515 520 525 1331 Ser Val Pro Tyr Thr Glu Trp Glu Leu Ser Val Ile Ile Gln Asp Lys 1332 530 535 540 1334 Gly Asn Pro Gln Leu His Thr Lys Val Leu Leu Lys Cys Met 11e Phe 1335 545 550 560 1337 Glu Tyr Ala Glu Ser Val Thr Ser Thr Ala Met Thr Ser Val Ser Gln 1338 $$ 565 $$ 570 $$ 575 1340 Ile Cys Ala Val Leu Leu Val Ile Met Val Leu Phe Ala Thr Arg Cys 1341 580 585 590 1343 Asn Arg Glu Lys Lys Asp Thr Arg Ser Tyr Asn Cys Arg Val Ala Glu 1344 595 600 605 1346 Ser Thr Tyr Gln His His Pro Lys Arg Pro Ser Arg Gln Tle His Lys 1347 610 615 620 1349 Gly Asp Ile Thr Leu Val Pro Thr Ile Asn Gly Thr Leu Pro Ile Arg 1350 625 630 635 1352 Ser His His Arg Ser Ser Pro Ser Ser Pro Thr Leu Glu Arg Gly 1353 645 650 655 1355 Gln Met Gly Ser Arg Gln Ser His Asn Ser His Gln Ser Leu Asn Ser 1356 $$ 660 $$ 665 $$ 670 1358 Glu Leu Thr His Ala Thr Pro Ala Val Glu Val Ser Gln Leu Leu Ser 1359 675680680 1361 Met Leu His Gln Gly Gln Tyr Gln Pro Arg Pro Ser Phe Arg Gly Asn 1362 $$ 690 $$ 695 $$ 700 $$ 1364 Lys Tyr Ser Arg Ser Tyr Arg Tyr Ala Leu Gln Asp Met Asp Lys Phe 1365 705 710 720 725 1367 Ser Leu Lys Asp Ser Gly Arg Gly Asp Ser Glu Ala Gly Asp Ser Asp 1368 $$ 725 $$ 730 $$ 735 1370 Tyr Asp Leu Gly Arg Asp Ser Pro Ile Asp Arg Leu Gly Glu Gly 1371 $$ 740 $$ 745 $$ 750 1373 Arg Leu Cys Thr Glu Glu Cys Arg Val Leu Gly His Ser Asp Gln Cys 1374 755 760 765 1376 Trp Met Pro Pro Leu Pro Ser Pro Ser Ser Asp Tyr Arg Ser Asn Met 1377 770 775 780 780 1379 Phe Ile Pro Gly Glu Glu Phe Pro Thr Gln Pro Gln Gln Gln His Pro 1380 785 790 795 800 1382 His Gln Ser Leu Glu Asp Asp Ala Gln Pro Ala Asp Ser Gly Glu Lys 810 1383 805 1385 Lys Lys Ser Phe Ser Thr Phe Gly Lys Asp Ser Pro Asn Asp Glu Asp 1386 820 825 830 1388 Ser Val Phe Gln Arg Leu Leu Pro Pro Ser Leu Asp Thr Tyr Ser Glu

RAW SEQUENCE LISTING

DATE: 01/29/2001 PATENT APPLICATION: US/09/759,130 TIME: 13:45:10

Input Set : A:\10147-61.txt

Output Set: N:\CRF3\01292001\1759130.raw

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1391 Leu Pro Ala Met Glu Glu Ile Pro Glu As<br/>n Tyr Glu Glu Asp Asp Phe 1392 850 850 860
                  1394 Asp Ala Ser Glu Leu Val Ala Glu Ile Asn Lys Leu Leu Gln Asp Val
1394 Asp Ala Ser Glu Leu val Ala Glu Leu al 1395 865 870 875 880

E--> 1397 Arg Glu Ser 88 3

1411 <210> Sev 10 NO: 38

1412 <211> LENGTH 423

1413 <212> TYPE: PRT 423 // Steel 295 Shown
                  1414 <213> ORGANISM: Homo sapiens
                  1416 <400> SEQUENCE: 38
                  1417 Ala Thr Arg Cys Asn Arg Glu Lys Lys Asp Thr Arg Ser Tyr Asn Cys 1418 \phantom{+}1 \phantom{
                  1420 Arg Val Ala Glu Ser Thr Tyr Gln His His Pro Lys Arg Pro Ser Arg 1421 20 25 30
                  1423 Gln Ile His Lys Gly Asp Tle Thr Leu Val Pro Thr Ile Asn Gly Thr 1424 \phantom{+}35\phantom{+}40\phantom{+}45\phantom{+}
                  1426 Leu Pro Ile Arg Ser His His Arg Ser Ser Pro Ser Ser Ser Pro Thr 1427 \phantom{-}50\phantom{+}55\phantom{+}55\phantom{+}60\phantom{+}
                  1429 Leu Glu Arg Gly Gln Met Gly Ser Arg Gln Ser His Asn Ser His Gln 1430 ^{\circ} 65 ^{\circ} 70 ^{\circ} 75 ^{\circ} 80
                  1432 Asn Phe Ser Leu Glu Leu Thr His Ala Thr Pro Ala Val Glu Val Ser 1433 \phantom{\bigg|}90\phantom{\bigg|}
                  1435 Gln Leu Leu Ser Met Leu His Gln Gly Gln Tyr Gln Pro Arg Pro Ser 1436 \phantom{\bigg|}100\phantom{\bigg|}100\phantom{\bigg|}105\phantom{\bigg|}
                  1438 Phe Arg Gly Asn Lys Tyr Ser Arg Ser Tyr Arg Tyr Ala Leu Gln Asp 1439 \phantom{\bigg|} 115 \phantom{\bigg|} 120 \phantom{\bigg|} 125
                  1441 Met Asp Lys Phe Ser Leu Lys Asp Ser Gly Arg Gly Asp Ser Glu Ala 1442 \phantom{\bigg|} 130 \phantom{\bigg|} 135 \phantom{\bigg|} 140
                  1444 Gly Asp Ser Asp Tyr Asp Leu Gly Arg Asp Ser Pro Ile Asp Arg Leu 1445 145 \phantom{\bigg|}145\phantom{\bigg|} 150 \phantom{\bigg|}150\phantom{\bigg|} 155 \phantom{\bigg|} 160
                 1447 Pro Ala Ala Met Arg Leu Cys Thr Glu Glu Cys Arg Val Leu Gly His 1448 165 \hspace{1.5cm} 170 \hspace{1.5cm} 170 \hspace{1.5cm} 175
                 1450 Ser Asp Gln Cys Trp Met Pro Pro Leu Pro Ser Pro Ser Ser Asp Tyr
1451 180 185 190
                 1453 Arg Ser Asn Met Phe Ile Pro Gly Glu Glu Phe Pro Thr Gln Pro Gln
1454 195 200 205
                 1456 Gln Gln His Pro His Gln Ser Leu Glu Asp Asp Ala Gln Pro Ala Asp 1457 210 215 220
                 1459 Ser Gly Glu Lys Lys Lys Ser Phe Ser Thr Phe Gly Lys Asp Ser Pro 1460 225 230 240
                  1462 Ser Glu Met Ser Ser Val Phe Gln Arg Leu Leu Pro Pro Ser Leu Asp
                  1463 245 250 255
                 1465 Thr Asn Cys Gly Pro Pro Leu Gly Thr His Ser Ser Val Gln Pro Ser 1466 260 265 270
                1468 His Glu Leu Met Asp Ala Ser Glu Leu Val Ala Glu Ile Asn Lys Leu 1469 275 280 285
1471 Leu Gln Asp Val Arg Gli Ser 295
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Input Set : A:\10147-61.txt

Output Set: N:\CRF3\01292001\I759130.raw

1594 <210> SEQ ID NO: 42 1595 <211> LENGTH 1183 1183 11sted, 1135 shown 1597 <213> ORGANISM: Mus sp. 1599 <400> SEQUENCE: 42 1600 Met Met Leu Leu Leu Pro Phe Leu Leu Gly Leu Cly Pro Gly Ser 1601 1. 5 10 1603 Tyr Leu Phe Ile Ser Gly Asp Cys Gln Glu Val Ala Thr Val Met Val 1604 20 1606 Lys Phe Gln Val Thr Glu Glu Val Pro Ser Gly Thr Val Lie Gly Lys 1607 35 40 451609 Asp Ala Phe Gln Ile Leu Gln Leu Pro Gln Ala Leu Pro Val Gln Met 1610 $$ 50 $$ 60 1612 Asn Ser Glu Asp Gly Leu Leu Ser Thr Ser Ser Arg Leu Asp Arg Glu 1613 65 70 75 80 1615 Lys Leu Cys Arg Gln Glu Asp Pro Cys Leu Val Ser Phe Asp Val Leu 1616 $90\,$ 95 1618 Ala Thr Gly Ala Ser Ala Leu Ile His Val Glu Ile Gln Val Leu Asp 1619 100 105 110 1621 Ile Asn Asp His Gln Pro Gln Phe Pro Lys Asp Glu Gln Glu Leu Glu 1622 115 120 125 1624 Ile Ser Glu Ser Ala Ser Leu His Thr Arg Ile Pro Leu Asp Arg Ala 1625 130 135 140 1627 Leu Asp Gln Asp Thr Gly Pro Asn Ser Leu Tyr Ser Tyr Ser Leu Ser 1628 145 $$ 150 $$ 155 $$ 160 1630 Pro Ser Glu His Phe Ala Leu Asp Val Ile Val Gly Pro Asp Glu Thr 1631 165 170 175 1633 Lys His Ala Glu Leu Val Val Val Lys Glu Leu Asp Arg Glu Leu His 1634 $$ 180 $$ 180 $$ 185 $$ 185 $$ 190 $$ 1636 Ser Tyr Phe Asp Leu Val Leu Thr Ala Tyr Asp Asn Gly Asn Pro Pro 1637 200200205 1639 Lys Ser Gly Ile Ser Val Val Lys Val Asn Val Leu Asp Ser Asn Asp 1640 210215 220 1642 Asn Ser Pro Val Phe Ala Glu Ser Ser Leu Ala Leu Glu 11e Pro Glu 1643 225 230 235 240 1645 Asp Thr Val Pro Gly Thr Leu Leu I.te Asn Leu Thr Ala Thr Asp Pro 1646 245 250 255 1648 Asp Gln Gly Pro Asn Gly Glu Val Glu Phe Phe Phe Gly Lys His Val 1649 $260 \hspace{1.5cm} 265 \hspace{1.5cm} 270$ 1651 Ser Pro Glu Val Met Asn Thr Phe Gly Ile Asp Ala Lys Thr Gly Gln 1652 275 280 285 1654 Ile Ile Leu Arg Gln Ala Leu Asp Tyr Glu Lys Asn Pro Ala Tyr Glu 1655 290 295 300 1657 Val Asp Val Gln Ala Arg Asp Leu Gly Pro Asn Ser Tle Pro Gly His 1658 305 $310 \hspace{1.5cm} 315 \hspace{1.5cm} 320$ 1660 Cys Lys Val Leu Ile Lys Val Leu Asp Val Asn Asp Asn Ala Pro Ser .1661 325 330 335325 1663 Ile Leu Ile Thr Trp Ala Ser Gln Thr Ser Leu Val Ser Glu Asp Leu 340

Input Set : A:\10147-61.txt
Output Set: N:\CRF3\01292001\1759130.raw

1666 Pro Arg Asp Ser Phe Ile Ala Leu Val Ser Ala Asn Asp Leu Asp Ser 355 360 365 1669 Gly Asn Asn Gly Leu Val His Cys Trp Leu Asn Gln Glu Leu Gly His 370 375 380 1672 Phe Arg Leu Lys Arg Thr Asn Gly Asn Thr Tyr Met Leu Leu Thr Asn 1673 385 390 395 400 1675 Ala Thr Leu Asp Arq Glu Gln Trp Pro 11e Tyr Thr Leu Thr Val Phe 1676 405405 1678 Ala Gln Asp Gln Gly Pro Gln Pro Leu Ser Ala Glu Lys Glu Leu Gln 1679 420 425 430 1679 1681 Ile Gln Val Ser Asp Val Asn Asp Asn Ala Pro Val Phe Glu Lys Ser 1682 435 440 445 1684 Arg Tyr Glu Val Ser Thr Trp Glu Asn Asn Pro Pro Ser Leu His Leu 1685 450 455 460 1687 Ile Thr Leu Lys Ala His Asp Ala Asp Leu Gly Ser Asn Gly Lys Val 1688 465 470 480 1690 Ser Tyr Arg Ile Lys Asp Ser Pro Val Ser His Leu Val Ile Ile Asp 1691 485 490 495 1693 Phe Glu Thr Gly Glu Val Thr Ala Gln Arg Ser Leu Asp Tyr Glu Gln 1694 $$ 500 $$ 505 $$ 505 $$ 510 1696 Met Ala Gly Phe Glu Phe Gln Val Ile Ala Glu Asp Arg Gly Gln Pro 1697 515 520 525 1699 Gln Leu Ala Ser Ser Ile Ser Val Trp Val Ser Leu Leu Asp Ala Asn 1700 530 . 535 . 540 1702 Asp Asn Ala Pro Glu Val Ile Gln Pro Val Leu Ser Glu Gly Lys Ala 1703 545 550 555 560 1705 Thr Leu Ser Val Leu Val Asn Ala Ser Thr Gly His Leu Leu Pro
1706 565 570 575 1708 Tle Glu Asn Pro Ser Gly Met Asp Pro Ala Gly Thr Gly Ile Pro Pro 1709 580 585 590 1711 Lys Ala Thr His Ser Pro Trp Ser Phe Leu Leu Cu Thr Ile Val Ala 1712 595 600 605 1714 Arg Asp Ala Asp Ser Gly Ala Asn Gly Glu Leu Phe Tyr Ser Ile Gln 1715 $$ 610 $$ 615 $$ 620 1717 Ser Gly Asn Asp Ala His Leu Phe Phe Leu Ser Pro Ser Leu Gly Gln 1718 625 630 635 640 1718 625 1720 Leu Phe Ile Asn Val Thr Asn Ala Ser Ser Leu Ile Gly Ser Gln Trp 1721 645 650 655 1723 Asp Leu Gly Ile Val Val Glu Asp Gln Gly Ser Pro Ser Leu Gln Thr 1724 660660665665667 1726 Gln Val Ser Leu Lys Val Val Phe Val Thr Ser Val Asp His Leu Arg 1727 675 680 680 685 1729 Asp Ser Ala His Glu Pro Gly Val Leu Ser Thr Pro Ala Leu Ala Leu 1730 690 695 700 1732 Ile Cys Leu Ala Val Leu Leu Ala Ile Phe Gly Leu Leu Leu Ala Leu 1733 705 710 715 1735 Phe Val Ser Ile Cys Arg Thr Glu Arg Lys Asp Asn Arg Ala Tyr Asn 1736 $$ 735 $$ 735 $$ 735 1738 Cys Arg Glu Ala Glu Ser Ser Tyr Arg His Gln Pro Lys Arg Pro Gln

Input Set : A:\10147-61.txt
Output Set: N:\CRF3\01292001\1759130.raw

1741 Lys His Ile Gln Lys Ala Asp Ile His Leu Val Pro Val Leu Arg Ala 1742 755 760 765 1744 His Glu Asn Glu Thr Asp Glu Val Arg Pro Ser His Lys Asp Thr Ser 1745 770 775 780 1747 Lys Glu Thr Leu Met Clu Ala Cly Trp Asp Ser Cys Leu Glu Ala Pro 1748 785 790 795 1750 Phe His Leu Thr Pro Thr Leu Tyr Arg Thr Leu Arg Asn Gln Gly Asn 805 810 1753 Gln Gly Glu Leu Ala Glu Ser Gln Glu Val Leu Gln Asp Thr Phe Asn 1754 820 825 830 1756 Phe Leu Phe Asn His Pro Arg Gln Arg Asn Ala Ser Arg Glu Asn Leu 1757 835 840 845 1759 Asn Leu Pro Glu Ser Pro Pro Ala Val Arg Gln Pro Leu Leu Arg Pro 1760 850 850 860 1762 Leu Lys Val Pro Gly Ser Pro Ile Ala Arg Ala Thr Gly Asp Gln Asp 1763 865 870 875 1765 Lys Glu Glu Ala Pro Gln Ser Pro Pro Ala Ser Ser Ala Thr Leu Arg 1766 885 890 1768 Arg Gln Arg Asn Phe Asn Gly Lys Val Ser Pro Arg Gly Glu Ser Gly 1769 900 905 910 1771 Pro His Gln Ile Leu Arg Ser Leu Val Arg Leu Ser Val Ala Ala Phe 1772 915 920 925 1774 Ala Glu Arg Asn Pro Val Glu Glu Pro Ala Gly Asp Ser Pro Pro Val 1775 930 935 935 940 1777 Gln Gln Ile Ser Gln Leu Leu Ser Leu Leu His Gln Gly Gln Phe Gln 1778 945 950 950 960 1780 Pro Lys Pro Asn His Arg Gly Asn Lys Tyr Leu Ala Lys Pro Gly Gly 1781 965 970 975 1783 Ser Ser Arg Gly Thr Ile Pro Asp Thr Glu Gly Leu Val Gly Leu Lys 980 985 990 1786 Pro Ser Gly Gln Ala Glu Pro Asp Leu Glu Glu Gly Pro Pro Ser Pro 1787 995 1000 1005 1789 Leu Ser Ser Leu Leu Asp Pro Asn Thr Gly Leu Ala Leu Asp Lys Leu 1790 1010 1015 1020 1792 Ser Pro Pro Asp Pro Ala Trp Met Ala Arg Leu Ser Leu Pro Leu Thr 1793 1025 1030 1035 1040 1795 Ser Glu Glu Pro Arg Thr Phe Gln Thr Phe Gly Lys Thr Val Gly Pro 1796 1045 1050 10551798 Gly Pro Glu Leu Ser Pro Thr Gly Thr Arg Leu Ala Ser Thr Phe Val 1799 1060 1065 1070 1801 Ser Glu Met Ser Ser Leu Leu Glu Met Leu Leu Gly Gln His Thr Val 1802 1075 1080 1085 1804 Pro Val Glu Ala Ala Ser Ala Ala Leu Arg Arg Leu Ser Val Cys Gly 1805 1090 1095 1100 1135 shown seg #42 1807 Arg Thr Leu Ser Leu Asp Leu Ala Thr Ser Gly Ala Ser Ala Ser Glu 1808 1105 1110 1115 ____ 1120 1810 Ala Gln Gly Arg Lys Lys Ala Ala Glu Ser Arg Leu Gly Cy Gly

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/759,130

Input Set : A:\10147-61.txt
Output Set: N:\CRF3\01292001\1759130.raw

Delete all but the amino acid numbering.

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Seg. # 81
<210> 81
<211> 4074
<212> DNA
<213> Homo sapiens
feethres to explain n's in the
<400> 81
sequence. (See next page)
gtggtcgcgg ccgaggtgag actgtgaaga aggaagaacg ttgcttgggc aaaaggagca 60
Also sac
<211> 4074
tatteteagg agaeggggee cetgeetgee acaecaagea ttaggeeace aggaagaece 120
ccatctgcaa gcaagcctag ccttccaggg agaaagaggc ccctgcagct ccttcatcat 180
gaactggcac atgatcatct ctgggcttat tgtggtagtg cttaaagttg ttggaatgac 240 #10 on the
cttatttcta ctttatttcc cacagatttt taacaaaagt aacgatggtt tcaccaccac 300
caggagetat ggaacagtet cacagatttt tgggageagt tececaagte ecaaeggett 360 Error Summery cattaceaea aggagetatg gaacagtetg ecceaagge taggetttt the cacagatttt the cacagatttt that the cacagatttt the cacagatttt that the cacagattt that the cacagatt the cacagattt the cacagattt that the cacagattt that the cacagatt the cacagattt that the cacagatt the
cattaccaca aggagetatg gaacagtetg ecceaaagae tgggaatttt ateaageaag 420
atgettette teatcact etgaatcate teggaatgaa ageagggact tetgeaaagg 480 Sheet.
aaaaggatcc acattggcaa ttgtcaacac gccagagaaa ctgaagtttc ttcaggacat 540
aactgatgct gagaagtatt ttattggctt aatttaccat cgtgaagaga aaaggtggcg 600
ttggatcaac aactctgtgt tcaatggcaa tgttaccaat cagaatcaga atttcaactg 660
tgcgaccatt ggcctaacaa agacatttga tgctgcatca tgtgacatca gctaccgcag 720
gatctgtgag aagaatgcca aatgatcaca gttccctgtg acaagaacta tacttgcaac 780
tctttttgaa tccatacagg tcgtctggcc aatgattctt ttacttacct atctgtctac 840
caqtaqcqqt ccttqcccat ttqqqaaact qaqcttcttt cttctqcact gggggactgg 900
atgctagcca tctccaggag acaggatcag ttttacggaa acaactcagt tagtatagag 960
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tgagaaatta taaacattat ttagggatta ccatggtgga agagggataa acataggtcc 1140
tgtgacttcg tctctgttct caagggaacc ccattcacat gcccctccta actccacaag 1200
cgagggtagc agaggctctc ctcagtctga actaaggctt ggccttgggg agggctccta 1260
gtgctgagct tggagcagca cggacagcag cattgtttat gggaatggag agaggtctgg 1320
gcaggatagg aaccttcttg gagacccctt tgaagaaaac caggcagcca agggagccaa 1380
acacactaga tttctgttct tcagcaaagc cctgaagaga cacttaagct aaaaattccc 1440
ttqtcatatt tctqaaactc cattataaca tatqtaactc ctttqtaacc aaaatttaqq 1500
taagcaggct tcctttgctc tgaaggtttt gagtacctgg ctgtatttgt tgagtatttt 1560
taaaattttg gatagtetet taggeaacaa taateacaat atatteatee etteagttet 1620
qqaqaaaqcc tqataccaqq cacaqcctac tqaccccaaq qaqcctggca ctgattggca 1680
tcacattgat ctagaactgg tccagccgcc gaagagtagg aaaagagaag ggctgctcag 1740
ggaaacattg gctgggggca cggaataagc acatagtaaa aagggaacat cagggtcaaa 1800
tggaaatcac ctgagacagg aaacagggag ttcatttggc cacactggaa gaaaggcaag 1860
aaagaggaag acaagtettg gagtaceetg getgttetee acaeteacaa gacateaget 1920
atactctgct tggtgcataa gaaagagaaa agagatgcct tttgtgtttt gagtaagaat 1980
aattaaacca taaggaagac catgtataaa actgatggaa ataatagtca ccaaagtaca 2040
gcacatacca ttttgtgtct aataacaatg tagcacagta atgactgtac atgtcattgt 2100
atgtatacca aacaagattg ttgtaaatca tattttttat tacaacacta agttctgctt 2160
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gacagaataa ctgcaaactt ttaagatcag gaaatgtaga catctagtga tttctttagt 2580
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aatggcctgg ggtgggagtg gggagtagat agggaatatg tgggatttgg tttaagttca 2700
tcattgggag agttcctgga tccttgcaag cttagataaa tgtgatcttt attagatagc 2760
agtggcatgc ttttaaaaaa aaaaggcaat gaaaatttag caagccactg aatttgagtt 2820
ttcactttgt ttctaatatg ctgtgtgaat cagtacagtt ttcttaccct ttcttggtct 2880
taatttcctt actgataaaa tggggtagta atacctatct caaaaaatta ttgcacatat 2940
taaataacat teetetatgt ateteaatgg cattagacat taggagaage attttgtgga 3000
ggatttgaag ttgagatctt catccaagaa gtagcttttc aatttgctag aagcttaatg 3060
```

```
taggcaagcc acttcatttt tcagaacttg tttactcatt tataatatgg gaataaaaat 3120
ttgtgcaagt cagagaaggg tgccttaaaa atgttgtggc caagccacat gagatcaaag 3180
acacactttt catgacctca aatgtgggcc caqcctaggt cagccaaccc ccatccaacc 3240
cttagactca cgaacaaatc cacctgagat cagcagagcc accctagatc agctgaaact 3300
tatagcaaaa totaactgat gcaatotoca totggootto atcottotoc otttattgto 3420
ctttcgtgta ttgttcatcc agcaaccagg atgatcttgt taaaacatta aacagattct 3480
gtcaykcttt maaaaaaaaa aaagccatga aat ngagca agccactgaa tttgagtttt 3540
cactttggtt tctaatatgc tgtgtgaatc agangagktt tcttaccctt tcttggtctt 3600
aatttcctta ctgataaaat qqqqtwqtaa tacctatctc aaaaaattat tqcacatatt 3660
arataacatt cetetatgta teteaatgge attagacatt aggagaagea ttttgtggag 3720
gatttgaagt tgagatcttc atccaagaag tagcttttca atttgstaga agcttaatgt 3780
aggcaagcca cttcattttt cagaacttgt ttactcattt ataatatggg aataaaaatt 3840
tgtgcaagtc agagaagggt gccttaaaaa tgttgtggcc aagccacatg agatcaaaga 3900
cacacttttc atgacctcaa atgtgggccc agcctaggtc agccaacccc catccaaccc 3960
ttagactcac gaacaaatcc acctgagatc agcagagcca ccctagatca gctgaaactc 4020
```

This error is indicated elsewhere in the sequence listing.

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY DATE: 01/29/2001.
PATENT APPLICATION: US/09/759,130 TIME: 13:45:14

Input Set : A:\10147-61.txt

Output Set: N:\CRF3\01292001\I759130.raw

L:20 M:270 C: Current Application Number differs, Replaced Current Application Number L:578 M:252 E: No. of Seq. differs, <211>LENGTH:Input:1124 Found:884 SEQ:5 L:697 M:252 E: No. of Seq. differs, <211>LENGTH:Input:679 Found:583 SEO:6 L:706 M:333 E: Wrong sequence grouping, Amino acids not in groups! L:707 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:7 L:707 M:252 E: No. of Seq. differs, <211>LENGTH: Input:22 Found:15 SEQ:7 L:771 M:252 E: No. of Seq. differs, <211>LENGTH:Input:423 Found:295 SEO:8 L:775 M:283 W: Missing Blank Line separator, <400> field identifier L:776 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (9) SEQUENCE: L:780 M:283 W: Missing Blank Line separator, <400> field identifier L:781 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (10) SEOUENCE: L:785 M:283 W: Missing Blank Line separator, <400> field identifier L:786 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (11) SEQUENCE: L:790 M:283 W: Missing Blank Line separator, <400> field identifier L:791 M:300 W: (50) Intentionally skipped Sequence, : Sequence 1d (12) SEQUENCE: L:795 M:283 W: Missing Blank Line separator, <400> field identifier L:796 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (13) SEQUENCE: L:800 M:283 W: Missing Blank Line separator, <400> field identifier L:801 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (14) SEOUENCE: L:805 M:283 W: Missing Blank Line separator, <400> field identifier L:806 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (15) SEQUENCE: L:810 M:283 W: Missing Blank Line separator, <400> field identifier L:811 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (16) SEQUENCE: L:815 M:283 W: Missing Blank Line separator, <400> field identifier L:816 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (17) SEQUENCE: L:820 M:283 W: Missing Blank Line separator, <400> field identifier L:821 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (18) SEQUENCE: L:825 M:283 W: Missing Blank Line separator, <400> field identifier L:826 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (19) SEQUENCE: L:830 M:283 W: Missing Blank Line separator, <400> field identifier L:831 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (20) SEQUENCE: L:835 M:283 W: Missing Blank Line separator, <400> field identifier L:836 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (21) SEQUENCE: L:840 M:283 W: Missing Blank Line separator, <400> field identifier L:841 M:300 W: (50) Intentionally skipped Sequence, : Sequence Td (22) SEQUENCE: L:845 M:283 W: Missing Blank Line separator, <400> field identifier L:846 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (23) SEQUENCE: L:850 M:283 W: Missing Blank Line separator, <400> field identifier L:851 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (24) SEQUENCE: L:855 M:283 W: Missing Blank Line separator, <400> field.identifier L:856 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (25) SEQUENCE: L:860 M:283 W: Missing Blank Line separator, <400> field identifier L:861 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (26) SEQUENCE: L:865 M:283 W: Missing Blank Line separator, <400> field identifier L:866 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (27) SEQUENCE: L:870 M:283 W: Missing Blank Line separator, <400> field identifier L:871 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (28) SEQUENCE:

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/759,130

DATE: 01/29/2001 TIME: 13:45:14

Input Set : A:\10147-61.txt

Output Set: N:\CRF3\01292001\1759130.raw

L:875 M:283 W: Missing Blank Line separator, <400> field identifier L:876 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (29) SEQUENCE: L:880 M:283 W: Missing Blank Line separator, <400> field identifier L:881 M:300 W: (50) Intentionally skipped Sequence, : Sequence 1d (30) SEQUENCE: L:1218 M:252 E: No. of Seq. differs, <211>LENGTH:Input:1150 Found:910 SEQ:33 L:1222 M:283 W: Missing Blank Line separator, <400> field identifier L:1223 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (34) SEQUENCE: L:1397 M:252 E: No. of Seq. differs, <211>LENGTH:Input:1123 Found:883 SEQ:35 L:1402 M:283 W: Missing Blank Line separator, <400> field identifier L:1403 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (36) SEQUENCE: L:1407 M:283 W: Missing Blank Line separator, <400> field identifier L:1408 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (37) SEQUENCE: L:1472 M:252 E: No. of Seq. differs, <211>LENGTH:Input:423 Found:295 SEQ:38 L:1476 M:283 W: Missing Blank Line separator, <400> field identifier L:1477 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (39) SEQUENCE: L:1811 M:252 E: No. of Seq. differs, <211>LENGTH:Input:1183 Found:1135 SEQ:42 L:1815 M:283 W: Missing Blank Line separator, <400> field identifier L:1816 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (43) SEQUENCE: L:1820 M:283 W: Missing Blank Line separator, <400> field identifier L:1821 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (44) SEQUENCE: L:1825 M:283 W: Missing Blank Line separator, <400> field identifier L:1826 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (45) SEQUENCE: L:1830 M:283 W: Missing Blank Line separator, <400> field identifier L:1831 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (46) SEQUENCE: L:1835 M:283 W: Missing Blank Line separator, <400> field identifier L:1836 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (47) SEQUENCE: L:1840 M:283 W: Missing Blank Line separator, <400> field identifier L:1841 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (48) SEQUENCE: L:1845 M:283 W: Missing Blank Line separator, <400> field identifier L:1846 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (49) SEQUENCE: L:1850 M:283 W: Missing Blank Line separator, <400> field identifier L:1851 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (50) SEQUENCE: L:2260 M:283 W: Missing Blank Line separator, <400> field identifier L:2261 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (62) SEQUENCE: L:2265 M:283 W: Missing Blank Line separator, <400> field identifier L:2266 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (63) SEQUENCE: L:2270 M:283 W: Missing Blank Line separator, <400> field identifier L:2271 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (64) SEQUENCE: L:2275 M:283 W: Missing Blank Line separator, <400> field identifier L:2276 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (65) SEQUENCE: L:2280 M:283 W: Missing Blank Line separator, <400> field identifier L:2281 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (66) SEQUENCE: L:2285 M:283 W: Missing Blank Line separator, <400> field identifier L:2286 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (67) SEQUENCE: L:2290 M:283 W: Missing Blank Line separator, <400> field identifier L:2291 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (68) SEQUENCE: L:2295 M:283 W: Missing Blank Line separator, <400> field identifier L:2296 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (69) SEQUENCE: L:2300 M:283 W: Missing Blank Line separator, <400> field identifier

VERIFICATION SUMMARY DATE: 01/29/2001 PATENT APPLICATION: US/09/759,130 TIME: 13:45:14

Input Set : A:\10147-61.txt

Output Set: N:\CRF3\01292001\I759130.raw

L:2301 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (70) SEQUENCE: L:2864 M:283 W: Missing Blank Line separator, <400> field identifier L:2865 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (79) SEQUENCE: L:2859 M:283 W: Missing Blank Line separator, <400> field identifier L:2870 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (80) SEQUENCE: L:2937 M:258 W: Mandatory Feature missing, <220> not found for SEQ 1D#:81 L:2937 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:81 L:2937 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:81 L:2937 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:81 L:2937 M:340 W: (46) "u" or "Xaa" used: Feature required, for SEQ ID#:81 L:2938 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:81 L:2938 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:81 L:2938 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:81 L:2938 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:81 M:340 Repeated in SeqNo=81 L:3107 M:283 W: Missing Blank Line separator, <400> field identifier L:3108 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (87) SEQUENCE: L:3155 M:283 W: Missing Blank Line separator, <400> field identifier L:3156 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (89) SEQUENCE: L:3160 M:283 W: Missing Blank Line separator, <400> field identifier L:3161 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (90) SEQUENCE: L:3227 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:91 L:3227 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:91 L:3227 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:91 L:3227 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:91 L:3227 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:91 L:3228 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:91 $L:3228\ M:258\ W:$ Mandatory Feature missing, <221> not found for SEQ ID#:91 L:3228 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:91 L:3228 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:91 M:340 Repeated in SeqNo=91 L:3412 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:96 L:3412 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:96 L:3412 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:96 T::3412 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:96 L:3412 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:96 L:3413 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:96 L:3413 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:96 L:3413 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:96 L:3413 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:96 M:340 Repeated in SeqNo=96 L:3590 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:101 L:3590 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:101 L:3590 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:101 L:3590 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:101 L:3590 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:101. L:3591 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:101 L:3591 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:101 L:3591 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:101

VERIFICATION SUMMARY DATE: 01/29/2001
PATENT APPLICATION: US/09/759,130 TIME: 13:45:14

Input Set : A:\10147-61.txt

Output Set: N:\CRF3\01292001\I759130.raw

L:3591 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:101 M:340 Repeated in SeqNo=101 L:3764 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:106 L:3764 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:106 L:3764 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:106 L:3764 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:106 L:3764 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:106 L:3765 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:106 L:3765 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:106 L:3765 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:106 L:3765~M:258~W: Mandatory Feature missing, <223> not found for SEQ ID#:106 M:340 Repeated in SeqNo=106 L:3934 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:111 L:3934 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:111
L:3934 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:111
L:3934 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:111 L:3934 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:111 L:3935 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:111 L:3935 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:111 L:3935 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:111 L:3935 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:111 M:340 Repeated in SeqNo-111 L:4037 M:283 W: Missing Blank Line separator, <400> field identifier L:4038 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (116) SEQUENCE: L:4042 M:283 W: Missing Blank Line separator, <400> field identifier L:4043 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (117) SEQUENCE: L:9098 M:333 E: Wrong sequence grouping, Amino acids not in groups! L:9099 M:252 E: No. of Seq. differs, <211>LENGTH:Input:24 Found:15 SEQ:300 L:9617 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:324 L:9617 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:324 L:9617 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:324 L:10982 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:343 L:16673 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:450 L:16720 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:451 L:16752 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:452 L:16778 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:453
L:16805 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:454 M:340 Repeated in SeqNo-454 L:16831 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:455 L:16852 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:456 M:340 Repeated in SeqNo=456 L:16893 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:457 M:340 Repeated in SeqNo=457